REMARKS/ARGUMENTS

Claims 1-30 are pending in this application. By this Amendment, the specification and claim 20 are amended. The specification has been amended to correct a typographical error, and contains no new matter. Support for the claims can be found throughout the specification, including the original claims, and the drawings. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

The Office Action rejects claims 1-30 under 35 U.S.C. §102(b) as being anticipated by Arimilli, U.S. Patent No. 5,757,801. This rejection is respectfully traversed.

Independent claim 1 recites a plurality of conversion processors, wherein each conversion processor is configured to modulate a communication signal provided by a user application to create an interim modulated signal, analyze the communication signal to determine a type of communication signal and demodulate the interim modulated signal to create a secondary original signal based on the type of communication signal, a main controller configured to process signals provided from at least one of the conversion processors, and a multiplexing/demultiplexing processor configured to logically multiplex signals output from the main controller, and to demultiplex an externally provided signal. Arimilli neither discloses nor suggests such features.

Arimilli discloses an advanced priority statistical multiplexer 300 with 8-channel interface cards 401a and 401b connected to host card 400 for multiplexing with packetized voice or

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facsimile information from VCE channel circuits 308 or 309. VCE channel circuits 308 and 309 are used to send/receive facsimile or analog voice information for packetizing and transmission over composite link lines 313a and 313b, which are connected to network ports 403a and 403b, respectively. More particularly, facsimile information received via VCE circuit 308 or 309 is demodulated, and the facsimile packets are passed through a dual port RAM 307 to a data processor 318. Additionally, telephone equipment will digitize voice information, compress and encode it into packets using a proprietary speech compression algorithm, and load the packets into RAM 307 for the data processor 318. The compressed voice packets, facsimile packets, and asynchronous data packets from cards 401a and 401b are then statistically multiplexed for transmission over link lines 313a or 313b.

The differences in statistical versus logical multiplexing are well known to one skilled in the art. Arimilli's advanced priority statistical multiplexer 300 relies on the dynamic adjustment of bandwidth allocation for a large number of channels over time based on the relative complexity associated with each channel. In contrast, the claimed conversion processors and multiplexing/demultiplexing processor employ logical multiplexing to create "virtual" channels within a single channel so as to optimize transmission capacity and speed within that single channel. More specifically, the claimed conversion processors create a secondary original signal for each communication signal which has been identified by type and appropriately modulated and demodulated. These secondary signals, which can be a mixture of data, voice, and facsimile,

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are then logically multiplexed by the multiplexing/demultiplexing processor in order to achieve improved performance.

Accordingly, it is respectfully submitted that independent claim 1 is not anticipated by Arimilli, and thus the rejection of independent claim 1 under 35 U.S.C. §103(b) over Arimilli should be withdrawn. Dependent claims 2-12 and 21-25 are allowable at least for the reasons discussed above with respect to independent claim 1, from which they ultimately depend, as well as for their added features.

Independent claim 13 recites, *inter alia*, logically multiplexing signals output from the main controller with a multiplexing processor, wherein the multiplexing processor is coupled to t he main controller. As discussed above, Arimilli's advanced priority statistical multiplexer is not designed to perform the logical multiplexing function recited in claim 13. Accordingly, it is respectfully submitted that independent claim 13 is not anticipated by Arimilli, and thus the rejection of independent claim 13 under 35 U.S.C. §103(b) over Arimilli should be withdrawn. Dependent claims 14-19 and 26-28 are allowable at least for the reasons discussed above with respect to independent claim 13, from which they ultimately depend, as well as for their added features.

Independent claim 20 recites, *inter alia*, modulating based on a type of the communication signal and then demodulating signals provided from the main controller using one of a plurality of conversion processors to transmit the signals respectively to a corresponding user application,

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wherein each of the plurality of conversion processors is coupled to the main controller and a corresponding user application, and wherein each of the plurality of conversion processors comprises a first demodulator/modulator configured to modulate a first type of communication signal provided from the main controller, a second demodulator/modulator configured to modulate a second type of communication signal provided from the main controller, and a third demodulator/modulator configured to modulate a third type of communication signal provided from the main controller. As discussed above, Arimilli neither discloses nor suggests the claimed conversion processors configured to modulate three distinct types of communication signals. More particularly, Arimilli does not conduct modulation/demodulation of three distinct types of signals in the disclosed advanced priority multiplexer, and it is the modulation of these three distinct types of signals in the claimed conversion processors which allows for the eventual logical multiplexing of these signals.

Accordingly, it is respectfully submitted that independent claim 20 is not anticipated by Arimilli, and thus the rejection of independent claim 20 under 35 U.S.C. §103(b) over Arimilli should be withdrawn. Dependent claims 29-30 are allowable at least for the reasons discussed above with respect to independent claim 20, from which they ultimately depend, as well as for their added features.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes

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would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Carol L. Druzbick**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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